

IN THE DRAWINGS:

Please replace Figure 27A with the corrected Figure 27A shown on the attached Replacement Sheet.

REMARKS

Applicant appreciates the time taken by the Examiner to review Applicant's present application. This application has been carefully reviewed in light of the Official Action mailed April 25, 2007. Claims 15-16 and 20-21 have been cancelled. Claims 17 and 22-24 have been amended. Claims 26-27 are new. Applicant respectfully requests reconsideration and favorable action in this case.

Drawings

The drawings were objected to by the Examiner. In particular, figure 27A is objected to regarding the use of "Tx Circuitry 2035" where the Examiner believes "Pulse Circuitry 2035" should be used.

In the corrected figure 27A, submitted herewith, circuitry 2035 is labeled Pulser Circuitry. Accordingly, withdrawal of this objection is respectfully requested.

Abstract

The Examiner objected to the abstract of the disclosure.

A new abstract has been submitted. Accordingly, withdrawal of this objection is respectfully requested.

Claim Objections

Claims are 15, 17, 20 and 22-24 are objected to by the Examiner.

Claims 17 and 22-24 have been amended and claims 15 and 20 have been cancelled. Accordingly, withdrawal of this objection is respectfully requested.

Rejections under 35 U.S.C. § 112

Claims 15-24 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Claims 15-16 and 20-21 have been cancelled. With respect to remaining claims 17-19 and 22-24, the rejection is respectfully traversed.

Claim 17 recites:

A method of communicating using a radio-frequency (RF) apparatus, comprising:
generating a first pulse signal;
generating a transmitting template signal wherein if the first pulse signal is a burst-mode signal, the magnitude of the autocorrelation of a signal generated from the convolution of the transmitting template signal and the first pulse signal approximates zero, and wherein generating the transmitting template signal comprises convolving a first template signal with a first set of code sequence elements, each of the first set of code sequence elements having a timing component and an amplitude component corresponding to the timing component;
generating an impulse train from the first pulse signal, wherein generating the impulse train comprises convolving the first pulse signal with the transmitting template signal;
transmitting the impulse train;
receiving a composite signal, wherein the composite signal comprises the impulse train and at least one multipath signal;
generating a receiving template signal for the composite signal, wherein generating the receiving template signal comprises convolving a second template signal with a second set of code sequence elements, each of the second set of code sequence elements having a timing component and an amplitude component corresponding to the timing component;
correlating the receiving template signal with the composite signal to produce a detected signal; and
decoding the detected signal.

Claims 17-19 and 22-24 regard systems and methods for communication systems which have substantially the same performance in burst mode and non-burst mode. To this end, a template signal can be developed which enables both burst mode and non-burst mode impulse trains to have substantially the same autocorrelation performance, e.g. an auto correlation which approximates zero. Claims 17 recites "generating a transmitting template signal wherein if the

first pulse signal is a burst-mode signal, the magnitude of the autocorrelation of a signal generated from the convolution of the transmitting template signal and the first pulse signal approximates zero.” Claim 22 recites similar limitations. Thus claims 17, 22 and the respective dependent claims regard the selection and utilization of a template signal which allows both burst mode and non-burst mode impulse trains to have substantially the same autocorrelation performance. Such a template signal is described on pages 71-72 of the Specification. For example, page 71 of the Specification states: “one may build a communication system in which the receiver has substantially the same performance in the burst mode and non-burst mode” and “if the pulse signal and the template signal correlate well ... , the receiver will have the substantially the same performance for burst-mode operation as it would for non-burst-mode operation.”

For the above reasons, Applicant respectfully submits that claims 17-19 and 22-24 comply with the written description requirement of § 112. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 15-24 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Claims 15-16 and 20-21 have been cancelled. With respect to remaining claims 17-19 and 22-24, the rejection is respectfully traversed.

For at least the reasons set forth above, Applicant respectfully submits that claims 17-19 and 22-24 comply with the enablement requirement of § 112. In particular, Applicant submits that pages 71-72 of the Specification enable claim limitations recited in claims 17-19 and 22-24. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 15-24 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 15-24 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 15-16 and 20-21 have been cancelled and claims 17 and 22-24 have been amended. Applicant respectfully submits that this rejection is now moot. Accordingly, withdrawal of this rejection is respectfully requested.

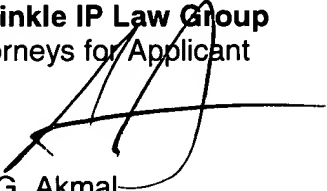
CONCLUSION

Applicant has now made an earnest attempt to place this case in condition for allowance. Other than as explicitly set forth above, this reply does not include an acquiescence to statements, assertions, assumptions, conclusions, or any combination thereof in the Office Action. For the foregoing reasons and for other reasons clearly apparent, Applicant respectfully requests full allowance of Claims 17-19, 22-24 and 26-27. The Examiner is invited to telephone the undersigned at the number listed below for prompt action in the event any issues remain.

The Director of the U.S. Patent and Trademark Office is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 50-3183 of Sprinkle IP Law Group.

Respectfully submitted,

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FIG. 26

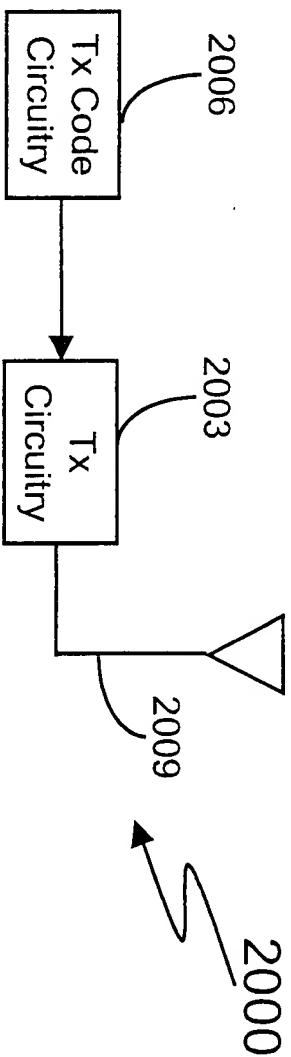


FIG. 27A

